U.S.S.N.:

Applicant: Coach Wei, et al 10/017,183

Filing Date: February 19, 2003

EMC Docket No.: EMC-06-235

In the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the

Application.

Listing of Claims:

1. (Currently Amended) A method for delivering an applications over a network in which

the business logic of the application is running on the a backend server, the method comprising

the steps of:

, the user interface of the application is rendered on a client device who is connected to the

backend server via a network. The Graphics User Interface API and event processing APi of

the application is implemented to be network aware instead of being local machine centric as

traditional GUI APIs:

the having the application in turn invoke a GUI API to present the application's user

interface; The application in turn invokes GUI API to present its user interface. However,

the network aware GUI API is invoked;

replacing the GUI API with a network aware GUI API running on a backend server

which translates translating the application's presentation layer information into a pre-

determined format based messages which describe[[s]] the a Graphical User Interface, event

processing registries, and other related information corresponding to - Such information

describes the presentation layer of the application in [[a]] high level, object level, messages;

which minimizes network traffic;

sending such messages to the client device via a network;

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processing the messages and rendering the a user interface by a client-side program, [.]

which delivers a the best possible user experience for that device according to the capability of

the specific client device[.];

rendering the user interface on the client device;

transmitting a plurality of necessary user input and a plurality of client-side events back

to the server by the client-side program via a predetermined protocol;

processing the user input and client-side events on the backend server, translating the

events and inputs as if they were locally generated, and sending such translated events and inputs

to the application for processing;

encoding and routing output of the application to the client device using the

predetermined messaging format; and,

further processing the output by the client-side program to refresh the Graphical User

Interface thereat.

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2. (Currently Amended) The method of Claim 1, wherein the GUI Graphics User Interface

API and the event processing API is are Java Foundation Classes (including Swing, AWT and so

on)[[;]]<u>.</u>

3. (Currently Amended) The method of Claim 1, wherein the client-side program is a

computer program based on an Operating System's API, such as Windows API, or X Windows

API and so on[[;]].

4. (Currently Amended) The method of Claim 1, wherein the client-side program is a

wireless device program written using the device's Operating System's API, such as Palm API

and Windows CE API[[;]].

5. (Currently Amended) The method of Claim 1, wherein the client-side program is a Java

program written using a Java API[[;]].

6. (Currently Amended) The method of Claim 5, wherein the JAVA API is AWT, Personal

Java, Java 2 Micro Edition based GUI API or Java Swing[[;]].

7. (Original) The method of Claim 1, wherein the predetermined protocol is HTTP.

8. (Original) The method of Claim 1, wherein the predetermined protocol is HTTPS.

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- 9. (Original) The method of Claim 1, wherein predetermined protocol is WAP.
- 10. (Original) The method of Claim 1, wherein predetermined protocol is proprietary.
- 11. (Currently Amended) The method of Claim 1, wherein the predetermined messaging format is based on XML[[;]].
- 12. (Currently Amended) The method of Claim 1, wherein the predetermined messaging format is proprietary[[;]].
- 13. (Original) The method of Claim 1, wherein the network is the Internet.
- 14. (Original) The method of Claim 1, wherein the network is a local area network.
- 15. (Original) The method of Claim 8, wherein the local area network is a bandwidth-limited slow speed network.
- 16. (Original) The method of Claim 1, wherein the network includes a wireless network.
- 17. (Currently Amended) The method of Claim 11, wherein the client device is selected from the group consisting of workstations, desktops, laptops, PDAs, wireless devices and other edge devices[[;]].

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18. (Original) The method of Claim 1, wherein the server and the client device are combined into one entity.

- 19. (Cancelled)
- 20. (Cancelled)
- 21. (Cancelled)
- 22. (New) A system for distributing an application including at least a server, at least a client device, and a communication means, the system comprising:
- a presentation layer of the application written using a server-side API based network programming model;

a business logic layer of the application and a data layer of the application both of which are written with the server-side API and running on the server; and where

the server-side API having a supporting infrastructure that sends the application's user interface information to a client device for presentation, handles communications problems, renders the application's user interface and dispatches necessary user input events back to the server for processing.

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23. (New) An apparatus for distributing an application over a network where the apparatus

includes:

a server;

a client device;

a network communication means;

a network based API module that is used to transparently replace the API on which the

application was developed;

a first means for running an application of the plurality of applications where a business

logic of the application runs on the server;

a second means for replacing the API of each of the plurality of applications with the

network based API so that each of the applications' logic runs on the server;

a third means for using the network based API to create a display for an application on

the client device;

a fourth means for transferring the user interactions on the client device to the server,

calculating the appropriate response to the input, and transmitting the appropriate response to the

client machine;

a fifth means for updating the display of the application on the client device based on the

responses from the server.

24. (New) The method of Claim 1 wherein the application code is not modified when distributing

the application and the application code is not distributed to the client device.

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25. (new) The method of Claim 1 used to distribute a plurality of pre-existing applications.